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THE EGGS AND FIRST INSTAR LARVAE OF THREE CALIFORNIA MOTHS

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IN REARING LEPIDOPTERA from captured females of identified species it occurs not infrequently that foodplants and early stages have not previously been recorded, and the rearing ends with the newly emerged larvae because of their refusal to accept experimentally offered plants.

It is justifiable to publish such incomplete records for the purpose of encouraging other entomologists, located in areas of varying plant associations to carry on the experiments with plants not available to the original recorder.

Three examples of such incomplete records are here included:

Scotogramma defessa Grote

Eggs were secured from a gravid female during the second week in April, 1962, at Del Mar, California. They hatched April 20, '62.

EGG: (Figure 1, No. 1), hemispherical, the base flattened and the top evenly rounded. It is topped by a minute round micropyle with a raised center and a surrounding depressed circlet. The ground color is a light straw. The basal diameter is approximately 0.65 mm. and the height 0.4 mm. The surface is covered by 48 vertical ribs, many of which coalesce as they approach the curved top. From 12 to 15 of these extend across the depressed circlet and about on the micropyle. The raised vertical ribs are topped by minute glistening pearly-white nodules.

Higher magnification discloses low horizontal ridges or lines running across the troughs between the vertical ridges.

The illustration shows the egg on lateral aspect, tipped slightly forward to show the micropyle.

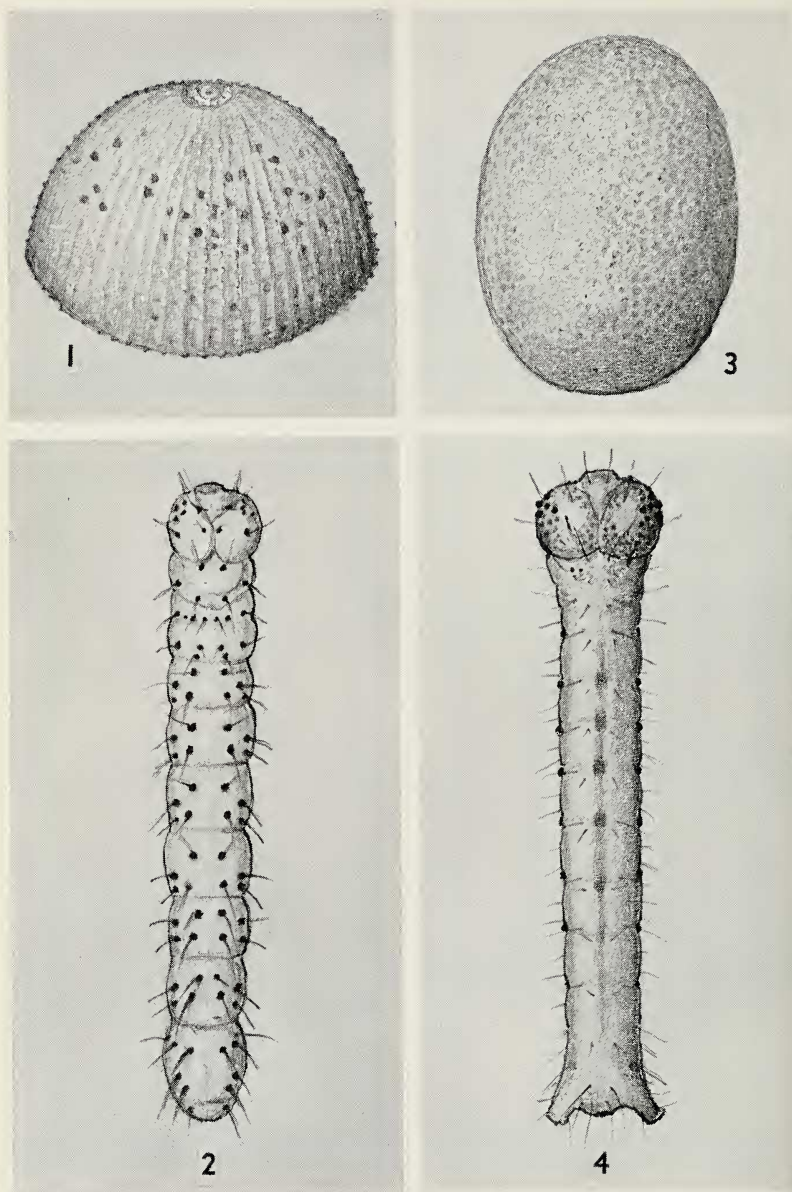


FIGURE 1

- No. 1. Egg of *Scotogramma defessa*, lateral aspect, X 50.
 No. 2. First instar larva of *S. defessa*, X 45.
 No. 3. Egg of *Camptogramma neomexicana* X approximately 70.
 No. 4. First instar larva of *C. neomexicana* X approx. 38.

FIRST INSTAR LARVA: (Figure 1, No. 2.), Body, cylindrical, translucent and white. Length, 2. to 2.25 mm. The head is yellow, and wider than the first segment. Numerous setae are scattered over the body. These are black, and arise from black papillae. Those on the thoracic segments are in line transversely across each segment. On the typical abdominal segments they alternate in a zig-zag pattern, giving the impression of two transverse rows running along each segment. There are two pairs of prolegs in addition to the anal pair.

No food plant notes were available. I tried lettuce, clover, parsley, sage, yarrow, oak, willow, *Ceanothus* sp., *Eriogonum* sp., *Adenostoma* sp., *Artemisia* sp., *Oenothera* sp., *Mimulus* sp., and *Rhus* of three separate species, without avail.

Camptogramma neomexicana Hulst

A captive female laid numerous eggs April 24, 1962. They were deposited singly on their sides.

EGG: (Figure 1, No. 3.), oval; ground color a delicate pink, but appearing nearly white because of the reticulation of raised white walls outlining hexagonal cells. Length of egg, 0.75 mm. Width, 0.4 mm. Just before hatching the eggs lose some of their pink tinge and become spotted with light chrome. Hatching occurred May 3, 1962.

FIRST INSTAR LARVA: (Figure 1, No. 4.), Length, 2.5 mm. Head width approximately 4.35 mm., broader than first segment and somewhat flattened; dull yellow with a darker tinge on the outer edges of cheeks and many bulging prominent black ocelli. Apparently there are six on each cheek, but they are somewhat confused with numerous black spots in the near vicinity. These spots occur along the frontal and adfrontal sutures and on the sides of the cheeks.

The body color is yellow. From the 4th to about the 10th segment there is a longitudinal middorsal stripe, discontinuous in some examples and more conspicuous in others. This line has a darker shading on the segmental junctures. There are raised black spots or papillae running in line longitudinally on the spiracular area, one on each segmental juncture. The legs are yellow as are also the anal prolegs and single pair of prolegs.

The setae are predominantly white.

The young larvae were tested on honeysuckle, oak, willow, bur clover, chamise, sage, toyon, pine, cyprus, and *Rhus* of three species, all without success.

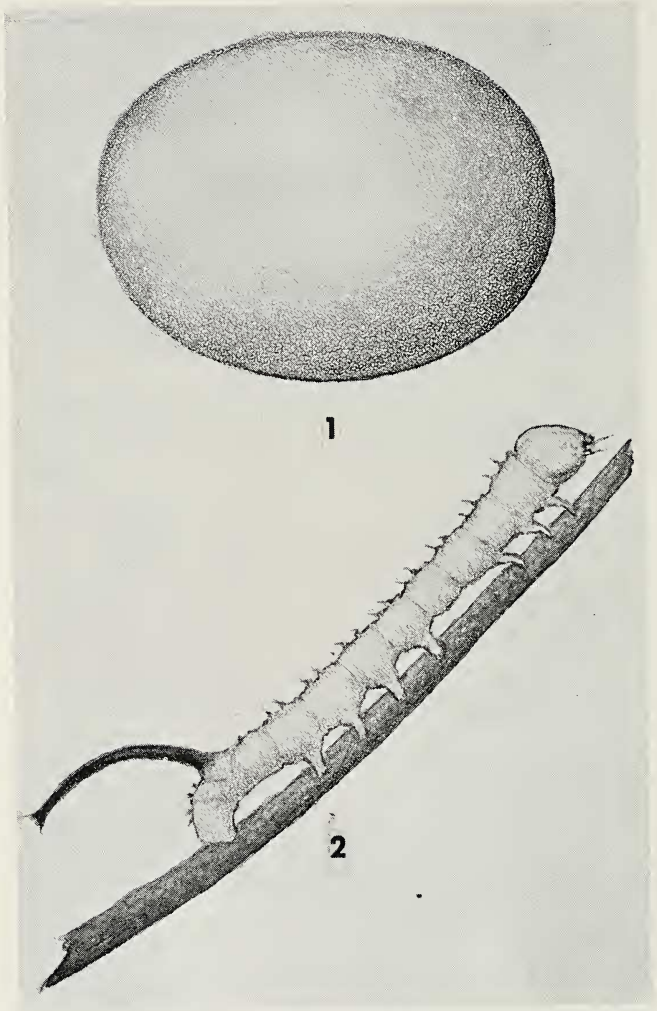


FIGURE 2

No. 1. Egg of *Sphinx vashti* X 45.No. 2. First instar larva of *S. vashti* X 15.

THE EGG AND FIRST LARVAL INSTAR OF
Sphinx vashti Strecker

Eggs of the rare hawk moth, *Sphinx vashti*, were sent me September 20, 1955 by Frank Sala. They were obtained September 13, '55 from a confined female collected at Wheaton Springs, Mescal Range, San Bernardino County, California.

EGG: (Figure 2, No. 1), length 1.8 mm., by 1.2 mm. tall. Color, a delicate green. The surface is smooth, and there is apparently no reticulated pattern or network of cell impressions.

The eggs hatched September 21, 1955.

FIRST INSTAR LARVA: (Figure 2, No. 2), length, 5 mm., not including the caudal horn. The latter measures 2.55 mm.

Head: larger than first segment; translucent light green including the ocelli and all appendages. Later the ocelli and tips of the mandibles show a tinge of gray.

Body: cylindrical, tapering gradually toward the cauda, but slightly expanded at the 11th segment where there is a large caudal horn. This is recurved caudally, and ends in a bifurcated tip. It is brownish-black in color.

The legs and prolegs are concolorous with the light green body.

I was unable to find a food plant that the larvae would accept, and they all died shortly after the accompanying notes and illustrations were made.